IN THE CLAIMS

1. (ORIGINAL) A composition for immobilizing and encapsulating viable and functional cells or bioactive substances comprising: a) a liquid polysaccharide solution of isotonic neutral chitosan; and b) a cross-linking solution consisting of a bifunctional or multifunctional, aldehyde or aldehyde-treated hydroxyl-containing polymer dissolved in physiological media.

2. (ORIGINAL) The composition of claim 1, wherein the cross-linking solution consists of a bifunctional or multifunctional cross-linker and a hydroxylated polymer of appropriate ratio and molecular mass such as to permit the hydroxylated polymer to remain liquid in solution.

3. (ORIGINAL) The composition of claim 1, where the cross-linking solution consists of glyoxal, or glyoxal-treated hydroxyethyl cellulose dissolved in a physiological medium.

4. (ORIGINAL) The composition of claim 1, wherein the composition comprises: a) 0.5 to 5.0% by weight chitosan, or chitosan derivative, or poly-amine containing polymer ; and b) 0.01 to 5.0% by weight hydroxyethyl cellulose, wherein said solution form a gel between temperatures of4 C and 42 C, said gel providing a physiological environment for maintaining viability of cells.

5. (CURRENTLY AMENDED) The composition of claim 4, further comprising:

   c) 0.0001-3 % glyoxal[[,]].

6. (CURRENTLY AMENDED) The composition of claim 4, wherein the composition ~~form~~ forms a gel within seconds to several hours after mixing (a) and (b).

7. (CURRENTLY AMENDED) The composition of claim 5, wherein the composition ~~form~~ forms a gel within seconds to several hours after mixing (a), (b) and (c).

8. (CURRENTLY AMENDED) The composition of claim 4, wherein the solution ~~form~~ forms a gel between temperatures of 20 C and 42 C.

9. (ORIGINAL) The composition of claim 1, wherein the chitosan is dissolved in dilute acid and mixed with 1.0 to 2.5% by weight of a salt of polyol consisting of mono-phosphate dibasic salt, or mono-sulfate salt.

10. (ORIGINAL) The composition of claim 9, wherein said mono-phosphate dibasic salt is mono-phosphate dibasic salt of glycerol.

11. (ORIGINAL) The composition of claim 9, wherein mono-phosphate dibasic salt of glycerol is selected from the group consisting of glycerol-2-phosphate dibasic salt, sn-glycerol 3-phosphate dibasic salt and L-glycerol-3- phosphate dibasic salt.

12. (ORIGINAL) The composition of claim 1, wherein chitosan is further mixed with phosphate buffer and salt.

13. (ORIGINAL) The composition of claim 1, further comprising a biologically active factor.

14. (ORIGINAL) The composition of claim 13, wherein the biologically active factor is selected from the group consisting of cells, a hormones, a drug, DNA, a bulking agent, a growth factors, a DNA, DNA-polymer complex,liposomes, a pharmacological agent, a metabolic factor, an antibody, a nutritive factor, an angiogenic factor, and a radioisotope.

15. (ORIGINAL) The composition of claim 14, wherein said cells are live cells.

16. (ORIGINAL) The composition of claim 14, wherein the cells are nucleus pulpopus, annulus fibrosis, or a mixture thereof.

17. (ORIGINAL) The composition of claim 14, wherein the cells are embryonic stem cells or stem cells derived from a tissue selected from the group consisting of bone marrow, adipose, muscle, brain, skin, liver, vascular smooth muscle, endothelium, blood, or placenta.

18. (ORIGINAL) The composition of claim 14, wherein the cells are primary cells, differentiated cells, genetically modified cells, hybridomas, immortalized cells, transformed cells, tissue fragment cells, organelles, or a mixture thereof, nucleated cells, enucleated cells, germ cells, platelet cells, matrix vesicles, cell vesicles,

demineralized bone paste, bone chips, cartilage fragments, or cell fragments or tissue fragments.

19. (ORIGINAL) The composition of claim 14, wherein the cells are autologous cells, allogeneic cells or xenogeneic cells.

20. (ORIGNAL) The composition of claim 14, wherein the biologically active factor is a cell attachment factor selected from the group consisting of fibrinogen, fibrin, fibronectin, hyaluronic acid, heparin, collagen, polylysine, polyornithine, receptor-binding cyclic peptide, receptor-binding protein.

21. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is an enzyme, a growth-factor or a growth factor-immobilized substance.

22. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is a plasmid DNA in the form of liposomes, a lipid complex, a chitosan complex, a poly-lysine complex, a DEAE dextran complex.

23. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is a vaccine.

24. (ORIGINAL) The composition of claim 23, wherein the vaccine comprises an infective viral particle.

25. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is a nutritive or metabolic factor.

26. (ORIGINAL) The composition of claim 25, wherein the a nutritive or metabolic factor is a lipid, amino acids, and a co-factor selected from the group consisting of cholesterol, glutamin, glucosamine, ascorbic acid, pyruvate, and lactate.

27. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is at least one element selected from the group consisting of peripheral blood, bone blood, cord blood, a blood product, blood-borne cells, serum, platelets, platelet-rich plasma, fibrinogen, a clotting factor, and a blood- borne enzyme.

28. (ORIGINAL) The composition of claim 14, wherein the biologically active factor is an osteogenic substance.

29. (ORIGINAL) The composition of claim 28, wherein the osteogenic substance is a member of the bone morphogenetic protein family selected from the group consisting ofTGF-p1, BMP-2, BMP-6, BMP-7, or a mixture thereof.

30. (ORIGINAL) The composition in claim 1, wherein hydroxyl-containing polymer is polyvinyl alcohol, dextran, linked with a bifunctional reactive aldehyde.

31. – 40. (CANCELLED)

41. (ORIGINAL) A method for repairing soft tissue, said method comprising the step of administering the composition of claim 1 at the site of a soft tissue in need of repair of a patient.

42. (ORIGINAL) A method for repairing or resurfacing a damaged cartilage, said method comprising the step of administering the composition of claim 1 in or around a cartilage in need of repair or resurfacing of a patient.

43. (CURRENTLY AMENDED) A method for repairing a meniscus of a patient, said method comprising the step of administering the composition of claim 1 at the site of ~~a~~ the meniscus ~~of a patient~~ in need of repair.

44. (ORIGINAL) The composition of claim 3, where the physiological medium comprises cell nutrients selected from the group consisting of glucose, amino acids, and vitamins, or a combination thereof, at isotonic and neutral pH.